Expanding Applicant Studies to More Institutions: A Feasibility Study

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SUPPORTING BC's EDUCATION SYSTEM

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Executive Summary

Throughout the 1990s, research regarding admission demand to the British Columbia (B.C.) public post-secondary education system focused on the flow of direct-entry[1] applicants from B.C. secondary schools to B.C. universities. In 2001, this research was expanded to include the flow of B.C. college transfer[2] applicants into four B.C. universities. Two years later a fifth university and the five B.C. university colleges were added. Conclusions from the most recent study, presented in March 2004, included the call for further expansion to include all public colleges and institutes in B.C. The purpose of this report is to assess the feasibility of the proposed expansion. The B.C. Council on Admissions and Transfer (BCCAT) contracted with Martin Butler of The Butlers and Associates to conduct the feasibility study. Institutional researchers, registrars and executive administrators from all sectors of the B.C. public post-secondary system were interviewed and/or surveyed during May and June of 2004 to determine, firstly, the necessity for expansion and secondly, how best to move forward. Several significant themes emerged from the wealth of data collected:

- Whichever approach is decided upon regarding expansion of applicant flow studies, it is important to proceed carefully and incrementally rather than attempting a system-wide overhaul of database structures and institutional procedures.
- The studies of applicant flows must provide current and timely information, preferably at the program level, to support institutional decision-making. Institutions to be included in further research expansion indicated they are not interested in research that is purely exploratory, preferring research which is useful in meeting their institutional goals.
- It is important to determine, clearly and up front, what information is required from an expanded applicant flow study.
- The research model to be developed should apply to all post-secondary sectors rather than attempting to have the university model fit other types of institutions.
- The approach used should be systematic, rather than one-off and ad-hoc, and would ideally integrate over the long term with existing projects such as the Grade 12 to University Transition – Applications and Registrations Tracking System (GUT) and the Central Data Warehouse (CDW). This is achievable if these existing projects can evolve to meet the data submission and reporting requirements of B.C.'s university colleges, colleges and institutes. If this cannot happen then integration may focus solely on the data collection phase.
- The lack of common definitions, comparable data and business processes among institutions and sectors must be addressed before proceeding with further studies. Realistically, this can be accomplished by keeping the studies as simple as possible, thus requiring minimal standardization of data definitions and processes.
- It is crucial that Provincial Education Numbers (PENs) be applied at the applicant stage in order to make the tracking of applicants across institutions and sectors more feasible.
- Certain key data elements are almost universally available for all or most applicants at most institutions. An expanded study that focuses on these key elements may be possible without a lot of work on the part of institutions. The availability of two program related data elements,

[1] Students admitted on the basis of B.C. secondary school completion and who entered a B.C. post-secondary institution within one year of B.C. high school graduation.

[2] Students admitted from a university college, college or institute in B.C. and who have transferred with sufficient credits to be considered a transfer student as the basis of admission.

'program of applicant' and 'program of registration', would have to be resolved to provide the program comparisons required by the non-universities.

- Any future research project should be managed through a steering committee representing the various post-secondary sectors. Ownership of the process and the results by the post-secondary system is deemed crucial to a successful endeavour.
- It is necessary to have a group or agency, preferably within the public education sector, coordinate the expansion of applicant flow studies and provide centralized support. This will not be possible without dedicated resources.

Overall, respondents felt that there were major advantages to expanding applicant flow studies to include a larger number of post-secondary institutions. For the universities, the need for a broader understanding of applicant behaviour falls into the 'nice-to-know' category as their operational needs are already being met through the existing analyses. For the non-universities the expansion is much more vital due to the changing circumstances under which they operate, which include the move towards information-based decision-making, performance measurement, student outcomes and annual service planning.

A number of recommendations flow from the findings and conclusions. The initial priority of the expansion project should not be to collect more data. It is recommended that the first phase focuses on establishing system-wide support for a work plan that ensures that data supports the analysis necessary to answer the questions, which are yet to be clearly defined. The purpose of this initial phase is not only to secure formally the system's support for moving ahead but also to identify the questions that need to be answered, the best mechanism for proceeding, and the resources required for managing the project from data collection right through to reporting. Recommended tasks as part of this first phase include:

- BCCAT, with the support of its Admissions Committee, should form a small steering committee with representatives from all public post-secondary sectors to determine the scope of an expanded applicant flow project and the preferred mechanism for completing it. The steering committee would base its work on the results of this feasibility study.
- The steering committee would identify and refine the questions that need to be answered in order to be of use to all institutions and the system as a whole.
- The steering committee would define the data elements, data specifications and analytic model required to generate the required information.
- The ability to assign PENs at the applicant stage to all applicants must be realized and implemented before proceeding with any data collection phase.
- The steering committee would determine the best mechanism for data collection and analysis that makes use of existing database structures.
- The steering committee would then recommend which body should take on the task of coordinating ongoing applicant flow studies and what the resource requirements would be.

Once system support has been secured, a coordinating body has been chosen, resources have been secured, questions have been identified, issues relating to the quality and consistency of the underlying institutional data and processes have been resolved and PENs have been implemented for all applicants, the coordinating body, with the guidance of the steering committee, would develop a work plan identifying the timelines, tasks and responsibilities of each stakeholder to ensure successful implementation of the project.

1. Introduction

The primary goal of the B.C. Ministry of Advanced Education is to achieve a top-notch Post-Secondary education system[3]. Achieving this goal entails maximizing system capacity, accessibility, efficiency and quality, focusing on system integration as well as student access and choice.

The mandate of the B.C. Council on Admissions and Transfer (BCCAT) is to facilitate admission, articulation and transfer arrangements among colleges, university colleges, institutes and universities within B.C. The Council encourages all post-secondary education institutions to develop policies and practices that facilitate the transferability of post-secondary credit courses so that credit granted at one institution can be applied toward credentials at other institutions. The Council also examines issues pertaining to capacity, demand and student mobility and recommends policies and practices that facilitate the admission process for direct entry and transfer students. BCCAT fulfils its mandate through leadership and coordination of activities that bring together institutional representatives. The resulting cooperation in planning and administering programs, policies and practices helps to ensure an accessible and responsive system.

Incrementally phased expansion is a characteristic common to all research conducted to date on B.C.'s post-secondary applicants. Initial research regarding admission demand to B.C. public post-secondary institutions focused on the flow of direct-entry applicants from B.C. secondary schools to four B.C. universities: The University of British Columbia (UBC), Simon Fraser University (SFU), the University of Victoria (UVic) and the University of Northern British Columbia (UNBC). Subsequent research included the flow of B.C. college transfer applicants to these four universities, and then later included Royal Roads University and the five B.C. university colleges.

The most recent study[4] identified a need to expand the research to include B.C.'s colleges and institutes. The purpose of this report is to assess the feasibility of potential expansion and, in doing so, address the following specific objectives:

- Determine and describe the benefits of having a broader understanding of applicant demand across a larger number of public post-secondary institutions in B.C.
- Describe briefly the previous work that has been done in B.C. to analyze applications, admissions and registrations to a number of institutions using unduplicated headcount data.
- Describe the feasibility of using different tools and methods to expand upon such applicant studies while conducting them more systematically. Methods include:
    - Continuing to do "one-off" studies by asking institutions for data in response to a specific set of questions regarding applicant flows; and
    - Making use of the Central Data Warehouse (CDW) to begin collecting information from colleges, university colleges and institutes at the applicant stage and integrating that data with data already collected and held by universities.

[3] Ministry of Advanced Education Service Plan 2004/04 – 2006/07 at: http://www.bcbudget.gov.bc.ca/sp2004/aved/aved.pdf
[4] A Working Paper on the Analysis of Applications, Admissions and Registrations of Applicants to B.C. Universities and University Colleges from Secondary Schools, Colleges, and University Colleges in B.C., 2002/2003 at: http://www.bccat.bc.ca/pubs/applicants0203.pdf

- Examining current work being undertaken by The University Presidents' Council through UBC in its project entitled "Grade 12 to University Transition – Applications and Registrations Tracking System" (GUT) and determining potential applicability to all public post-secondary institutions.

- Assess the impact that variations within institutions' application and admissions procedures and resource levels have on their ability to integrate and analyze admissions data for drawing meaningful conclusions.

- Make recommendations on how best to proceed with conducting applicant studies among all post-secondary institutions, or among a broader subset of the larger institutions, taking into account the cost of various options for proceeding.

2. How to Apply to a B.C. Public Post-Secondary Institution

British Columbia's public post-secondary education system is made up of 27 institutions: 5 universities[5], 5 university colleges[6], 11 colleges[7], 5 institutes[8] and the B.C. Open University. The system offers the following major types of education:

- Preparatory Programs: aimed at providing preparatory training for adults in secondary school subjects, literacy and language. These include Adult Basic Education, English as a Second Language and Adult Special Education.

- Applied Programs: providing training, usually of two years or less in duration, for specific occupations, industries and areas of employment. These include apprenticeship programs supplying primarily on-the-job trades training supplemented with several months of classroom instruction each year.

- Undergraduate Studies: leading to bachelor's degrees in general, applied and professional studies in the Arts, Humanities, Social Sciences, Sciences, Engineering, Business, Law and Medicine. These include the one- and two-year Arts and Sciences programs at colleges that can lead to a two-year associate degree from the college and be credited towards an undergraduate degree at B.C. degree granting institutions.

- Graduate Studies: programs of advanced studies leading to master's and doctoral degrees in the Arts, Humanities, Social Sciences, Sciences, Engineering, Business, Law and Medicine.

There are two ways of applying for admission to a B.C. post-secondary institution. The first is to apply directly to each institution. The second is to apply online using the web-based Post-Secondary Application Service of British Columbia (PASBC) operated by BCcampus. Twenty-five of B.C.'s public post-secondary universities, university colleges, colleges and institutes accept applications via the

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[5] Royal Roads University, Simon Fraser University, The University of British Columbia, University of Northern British Columbia, University of Victoria

[6] Kwantlen University College, Malaspina University-College, Okanagan University College, University College of the Cariboo, University College of the Fraser Valley

[7] Lower Mainland Region: Capilano College, Douglas College, Langara College, Vancouver Community College
Interior Region: College of the Rockies, Selkirk College
North Region: College of New Caledonia, Northern Lights College, Northwest Community College
Island Region: Camosun College, North Island College

[8] British Columbia Institute of Technology, Emily Carr Institute of Art and Design, Institute of Indigenous Government, Justice Institute of BC, Nicola Valley Institute of Technology

PASBC website[9]. However, PASBC does not store applicant information nor does it require information from institutions regarding the status of applications. A growing number of B.C.'s post-secondary distance education programs and courses are being made available online through BCcampus as well. BCcampus was established in 2002, with a mandate to provide British Columbian learners with a coordinated, web-based access point to online learning programs and services provided by B.C. public post-secondary institutions.

3. History of B.C. Post Secondary System-Wide Research

B.C.'s track record for inter-institutional cooperation in system-wide student level research covers over 15 years, originating with the College and Institute Student Outcomes project (OWG) and the Link File, the forerunner of the Central Data Warehouse (CDW). Until 1993, these projects were managed by B.C. Research, with steering committees composed of representatives from the institutions and the relevant provincial government ministry. With the dissolution of B.C. Research in 1993, the institutional research (IR) community and the provincial government supported the move of B.C. Research analysts relevant to the projects to facilities located at BCIT. The group renamed itself the Strategic Information Research Institute (SIRI) and continued to support the projects until 1995, when the projects moved closer to government with the creation of the Centre for Education Information Standards and Services (CEISS).

During the CEISS era, OWG continued reporting on an annual basis, but the more contentious Link File project lay fallow until resurrected as the CDW for which the first full set of data was submitted in 2002 without the participation of the universities. When CEISS was dissolved in early 2004, the College and Institute Student Outcomes Project moved to B.C. Stats, the central statistical agency of B.C., along with the group of CEISS analysts working on the project. The CDW and associated staff were moved into the Ministry of Advanced Education.

Key factors in the development of system-wide student level analyses have been:

- changes in philosophy regarding how close to government these projects should be;
- the growing need to measure performance objectively;
- impacts of complying with freedom of information and privacy protection legislation;
- implementation of the Provincial Education Number (PEN);
- the shift toward information-based decision-making in institutions and in government;
- the need for these projects to provide a return on the investments of stakeholders in the form of credible, meaningful and timely data; and
- technological advances impacting how data is moved, integrated, stored and analyzed.

These factors and others will influence how the need for this information continues to be met.

[9] http://www.pas.bc.ca/

4. History of B.C. Applicant Studies

Since the 1990s, four of B.C.'s universities[10] have conducted collaborative studies to determine the flow of direct entry Grade 12 applicants from B.C. secondary schools to B.C. universities using unduplicated headcount data.[11] In 2001, BCCAT provided funds to conduct a similar applicant study on the flow of B.C. college transfer applicants in 2001/02 to the same four universities, making comparisons with direct entry applicants. The Office of Analytical Studies at SFU conducted the research.

The SFU conducted study[12] aimed to summarize the multiple application, qualification, admission and registration patterns of the 8,792 college transfer students who completed an application for admission to at least one of the four B.C. universities in either the Summer or Fall of 2001. Of those students, 85 percent were qualified for general admission, 73 percent received at least one admission offer and 60 percent registered at a university. From this it follows that 15 percent of college transfer applicants were not qualified for university admission and 15 percent of qualified applicants were not offered admission. Apart from the fact that B.C. grade 12 applicants submitted more applications on average than B.C. college transfer applicants (1.76 versus 1.16), results were very similar for grade 12 applicants as for college transfer applicants.

In 2002, BCCAT held discussions with IR directors from the university colleges and an IR director representing universities to examine the possibility of expanding the applicant studies to include the five university colleges. Specific goals of this study were to:

- Determine the data issues associated with expanding the applicant flow study to include five universities (including Royal Roads) and five university colleges; and
- Determine whether or not students who were admitted but did not register at universities, or who were denied admission, were applying to and registering at university colleges for degree completion opportunities.

Based on those discussions, BCCAT requested and received special project funding from the Ministry of Advanced Education to prepare a report on an expanded applicant study. The SFU Office of Analytical Studies again led the research team, focusing on collecting and analyzing applicant data from 10 institutions using unduplicated headcount information to determine the flow of transfer and direct entry students to academic programs at both universities and university colleges and also to applied programs at university colleges. Although the colleges and institutes as applicant destinations were not included in this study, their transfer students who applied to any of the 10 institutions were included. Results[13] were presented with several caveats relating to comparability issues regarding data from, and definitions used by, universities and university colleges; incomplete data and data quality issues from university colleges; and data matching issues due to the lack of a single unique identifier for applicants in the B.C. post-secondary system.

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[10] Simon Fraser University, The University of British Columbia, University of Northern British Columbia, University of Victoria

[11] Reports on these studies can be found on the SFU Web site at: http://www.sfu.ca/analytical-studies/AppsAnalysis/index.htm

[12] Analysis of Applications, Admissions and Registrations of B.C. College Transfer Applicants to B.C. Universities, 2001/02 at: http://www.bccat.bc.ca/pubs/heslop2002.pdf

[13] A Working Paper: Analysis of Applications, Admissions, and Registrations of Applicants to B.C. Universities and University Colleges from Secondary Schools, Colleges, and University Colleges in B.C., 2002/03 March 2004 at: www.bccat.bc.ca/pubs/applicants0203.pdf

Key conclusions from the study indicated that a more complete picture of unduplicated headcount applicant flows could be built by including all sources of applicants and all B.C. application destinations in a future study. The study also highlighted the importance of having a unique identifier, such as a Provincial Education Number (PEN), assigned to all applicants to facilitate studies on flows of applicants and registrants. The present feasibility study is a result of the recommendations of the university/university college applicant study.

The Office of Planning and Institutional Research at UBC is leading the "Grade 12 to University Transition – Applications and Registrations Tracking System" (GUT) project. The focus of this project is to create a database that encapsulates student information about B.C. grade 12 graduates, their transition to B.C. universities and, eventually, the results of their educational activities. Participants include UBC, SFU, UNBC, UVic, and the B.C. Ministry of Education. GUT plans to test a new database model that would allow secure remote client querying that draws directly from university and B.C. Ministry datasets, eliminating the need for each participant to send UBC files of applicant data across the internet.

5. Feasibility Study Methodology

This feasibility study was designed to gather information from institutional researchers, registrars and executive administrators across all sectors of the B.C. public post-secondary system to determine the necessity of expanding applicant studies and how best to move forward. Research was conducted in two stages over May and June 2004 (see Appendix A). The studies focused on two surveys:

- A qualitative assessment of the need for expansion, models for expansion and recommended actions was conducted using in-person and telephone interviews of 18 representatives from B.C. universities, university colleges, colleges, institutes, agencies and the provincial government. The interview outline is detailed in Appendix B.
- A quantitative assessment of the availability of applicant data across public institutions from all sectors was conducted using a self-completion questionnaire posted on the BCCAT website. The questionnaire is detailed in Appendix C. A list of all interviewees and questionnaire participants is included in Appendix D.

Representatives of the following organizations participated in the study by way of the interviews and/or questionnaire. All participants were informed that their responses would be kept confidential.

B.C. Post-Secondary Institutions:

British Columbia Institute of Technology
British Columbia Open University
Camosun College
Capilano College
College of New Caledonia
College of the Rockies
Douglas College
Emily Carr Institute of Art & Design
Kwantlen University College
Langara College
North Island College

Northwest Community College
Okanagan University College
Selkirk College
Simon Fraser University
University of British Columbia
University College of the Cariboo
University College of the Fraser Valley
University of Northern British Columbia
University of Victoria
Vancouver Community College

Other Post-Secondary System Organizations:

BCcampus
B.C. Ministry of Advanced Education
B.C. College Presidents Association
B.C. Registrars Association
The University Presidents' Council

6. Feasibility Study Findings

The information in this section represents a synthesis of findings from the interviews and the self-completion questionnaire, with the majority of qualitative information coming from the telephone and in-person interviews.

6.1. Suggested Benefits of Expanded Study

The study revealed that respondents considered the main benefits of developing a broader understanding of applicants would be to:

- Provide more information on profiling applicants, their flows and their characteristics.
- Meet the needs of the post-secondary education system with regards to regional and institutional planning, decision-making and accountability.
- Measure demand for spaces and programs.
- Measure the extent to which applicants apply to multiple institutions across sectors.
- Meet the needs of enrolment management, enabling institutions to meet targets detailed in their recent service plans.
- Allow for decisions being made on empirical rather than anecdotal information.
- Provide information that reduces the risk of government intervention.
- Improve the information currently provided to applicants.

Potential uses of expanded applicant data by institutions and agencies could be split into strategic and operational uses. Strategic uses would be:

- Strategic Planning;

- Estimating and understanding system-, institutional-, and program-specific demand;
- Profiling applicant characteristics, intentions and flows;
- Reviewing institutional business processes; and
- Identifying opportunities for developing partnerships among institutions.

Operational uses would be:

- Recruitment;
- Program review and development;
- Marketing and advertising;
- Enrolment management; and
- Ministry's budget process.

Some additional comments relating to the benefits of a proposed expansion follow, quoted verbatim:

"The information provided to our client base (students, learners of all ages) is currently inadequate."

"We sense the world changing and we need to know where we are. For the Lower Mainland colleges it is tough to get an idea of current enrolment demand, given that students may live close to several institutions and apply to more than one. It is unclear why we are seeing patterns of high and low demand. We do not know if students are going elsewhere or just disappearing. The shift in government toward performance measurement, changes in mandate to develop and offer degrees, have led to a growing need for enrolment management and measuring demand quantitatively."

"Given the pressure on institutions to recruit and be accountable for FTE's (full time equivalents) we need better data than we have now to see if the targets we have are realistic."

"We get some info. on intentions from talking to parents and students but this anecdotal (feedback) probably does not match reality. We would prefer to base our decisions on data."

"There are lots of advantages if the project relates to specific issues and complements information already known and data already collected. Specific questions need to be identified beforehand."

"Government control tends to happen where there is a lack of information. The system needs to propose solutions. This project would help keep the government at arm's length."

6.2. Suggested Barriers to Expansion of Applicant Studies

Potential barriers that any expansion project would face, and potential solutions to overcoming them as suggested by respondents, are:

Strategic Context

- All stakeholders need to see a return on investment for their participation in the form of timely, accurate, relevant and meaningful information.

- Institutions from all sectors must be involved.
- The project needs to be analysis-centric rather than data collection-centric.
- Development of data definitions, data processing rules, analytic models and analysis needs to be transparent and under institutional control.
- Institutional buy-in and participation will be impacted if results are not favourable to specific institutions.
- Questions and strategic context must be identified beforehand.
- Determining what information and data is already available will identify the focus of any data collection and analysis project.
- Freedom of information and protection of privacy laws must be respected.
- The project must complement and possibly integrate with existing applicant studies and system data collection initiatives.
- Factors broader than the public system must be taken into account. This includes such elements as private institutions, student grant issues, labour market impact and limitations arising from defining demand as a function of applications submitted.
- The project should be centrally coordinated with dedicated resources.

Quality of Analytic Model

- The university data model may not be applicable to the non-universities (e.g., the notion of a 'qualified applicant' is not relevant in open enrolment programs).
- Data must be of sufficient quality to support analysis.
- Institutional comparisons may be invalid due to inconsistencies between institutional business processes, institutional definitions and data availability.
- The institutions may not be able to document accurately their applicant data handling processes and procedures.
- Work needs to be completed to remove as many of the caveats detailed in the 2004 BCCAT Working Paper as possible.
- PENs are not currently available for all applicants. The burden and quality of data matching must improve.
- The resulting data must not be too general to be useful. Program-specific results on multiple applications and student flows are required by the non-universities.
- Results must be available in a timely manner so they can be used in operational decision-making by the non-universities.
- The results database must be accessible in an interactive form allowing online query. This facility needs adequate testing before going live.
- Steps must be taken to avoid misinterpretation and misuse of results.

Ease of Participation

- The impact on institutional workload must be considered. The main costs to the institutions involved in submitting, analyzing and reporting system-wide student level applicant data are the administrative, programming, software development and analysis resources required of participants. Additional costs would involve refining business practices, professional development needs relating to the project and costs involved in reallocating resources from other projects.
- System pressures for business process change may not be suitable for all institutions.
- Smaller colleges may have difficulty being full participants due to lack of resources and existing data submission requirements.

Some additional comments relating to barriers to the proposed expansion follow, quoted verbatim:

"We need to be very clear on what we need to do: Do we need this as a system to make decisions? Do people still want to pull off their own data or have a system view? I can see the Ministry liking this. Do people want that level of monitoring? Does this give us what we want to know? We need to understand what we are doing."

"Going to a System-Wide approach you end up doing things so general when we need specifics. We don't want to have to do our own survey to supplement."

"(Our) ability to extract this data would need to be implemented and tested well in advance of the date the information was required; cost of developing the above is a concern; workload impact of such a request needs to be taken into consideration, as well as the timing; this institution 'closes out' applications when the new application year begins (applicant statuses change); many of the processes in application/admissions process are time-sensitive and depending on when the request is made, data may/may not be available; program waitlists for oversubscribed programs are maintained manually at this institution (these students remain at a certain application status until the program is filled and/or the program begins, then the status used to track it changes). Different institutions use all manner of coding to track their applicants through the process, e.g. application status codes - comparability of data is a concern."

"Timing of submission so that it does not conflict with peak periods at the Institutions. Provide sufficient lead time and data definitions."

"Data comparability is a huge concern. In particular, the procedural practices with respect to different kinds of programs can be considerable, and the comparability of procedures across the institutions is very low. This is about definition but goes beyond that to the nature of the processes that create the data in the first place."

"I have the same concerns that felled earlier efforts. These are compatibility of the data and the procedural and definitional kinds of compatibilities, e.g. how procedures differ from program group to program group. Institutional practices differ across the province in regard to tracking every contact, capping, bringing applicants to enrolment, timing of pre-requisites and eligibility. Earlier efforts failed on this so the current project may be doomed to failure because of the procedural chaos. Trying to get procedures in synch is doomed to failure. A possible solution would be to make the common denominators of the data so simple that the procedural elements wash out."

"Because admission is a fluid series of steps and the student record system is designed for operational purposes, it may be difficult to report historical data about groups of diverse students. Definitional and workload issues could be substantial, especially across institutions with different business practices. Technical and comparability issues could be substantial for system-wide studies of admissions. The Central Data Warehouse has found technical issues are challenging even for registrations ... and registrations are much easier to deal with than admissions. Serious concern that a university model of admissions will be applied to colleges. The universities use much simpler and consistent processes than colleges."

"A fishing expedition is not useful."

"I question the value of such a study when colleges have open admission."

"We will still not capture those who did not apply because they were convinced they would not get in anyway."

"Bad data is worse than no data."

"We need as near to a real time solution as possible ... results within 6 months of collecting data. We need access to the data: read-only, queryable, web-enabled."

6.3. Case Level Applicant Data Availability

Twenty institutions responded to the questionnaire on data availability for applicants to institutions' 2003/04 undergraduate and applied programs, representing an 83 percent response rate from the 24 institutions surveyed. Respondents included 10 colleges and institutes, 4 universities, 5 university colleges and the B.C. Open University.

Of these 20 institutions, 15 could electronically identify all applicants to their 2003/04 undergraduate and applied programs, 4 stated the data was available for most applicants, and 1 stated that the information was not available electronically.

The 10 colleges and institutes that participated in the survey identified the following factors as affecting availability and quality of applicant data at their institutions:

- In some areas, business processes limit the number or quality of applications received.
- Students may have multiple registration dates in a single term, depending upon when they registered for each course.
- Students may not register by program. For example, many students are in open access courses that are not program based.
- Not all applications are completed by the student. Students can be conditionally accepted where documents can be supplied after admittance.
- Application forms may request certain information but not consider it mandatory. Some specific data elements may be available, therefore, but only if provided by the applicant.

- For some institutions information is available only when a student has completed an application.
- Programs may not have term-based admissions; hence, application tracking information such as 'semester/term of admission' does not apply.
- Many students (e.g. part time studies, specific programs with open enrolment) do not have a formal application process due to open registration.
- For open enrolment programs, institutions can infer that admission was accepted if the applicant registered for courses. If students did not register, institutions do not know whether students either didn't try to register (declined offer of admission) or tried unsuccessfully to register (accepted offer of admission).
- Some institutions focus on program specific admission requirements; 'general admission' is not a universal concept.
- There may be no differentiation between an applicant accepted and an applicant who is eligible to register. If applicants meet the requirements for general admission, then it can be inferred that they are eligible to register.
- Offers of admission may not expire at some institutions.
- Waitlists apply only to certain programs.
- Some data may be available but not stored electronically, e.g. application fees paid.
- For institutions with multiple campuses, regional campus applicant data may be less complete than that of the main campus.
- Part time studies programs may have less complete applicant information than full time programs.
- International applicants may have non-standard, unique identifier data, e.g. postcodes.
- Secondary school information may not be available if the applicant attended outside of B.C. or if the student is 'mature'.
- For applicants transferring credits, full information on the source institution may only be available if the institution is in B.C.
- For applicants transferring credits, the country of the source institution may only be stored if the institution is outside of Canada.
- Secondary school and institute of transfer attendance dates may be easier to collect than completion dates.
- Transfer credit information may not be available until after the application process is complete.
- As regards to the basis of admission, some institutions will know the program of admission and whether or not that program was of open or limited enrolment.

A list of unique identifiers, transfer identifiers and application processing identifiers was developed to provide a detailed picture of applicant flows. For each identifier the following tables detail its availability across the 20 institutions that participated in the survey.

Table 1: Availability of Unique Applicant Identifiers

Unique Applicant Identifiers	Available for All Applicants	Available for Most Applicants	Available for Less than Half the Applicants	Not Available For Any Applicants	Not Applicable To My Institution	Don't Know
Provincial Education Number	2	13	4	0	0	1
Your Institution's Unique Student Identification Number	18	1	0	0	0	1
Applicant's First Name	16	3	0	0	0	1
Applicant's Middle Name	4	12	2	0	0	2
Applicant's Last Name	18	1	0	0	0	1
Applicant's Preferred Name	5	5	4	3	0	3
Applicant's Gender	10	9	0	0	0	1
Applicant's Date of Birth	9	10	0	0	0	1
Post Code of Applicant's Mailing Address	9	10	0	0	0	1
Alternative Post Code of Applicant's Mailing Address	0	4	0	5	5	6
Post Code of Applicant's Permanent Address	4	9	1	3	2	1

BCCAT is currently conducting a study to determine how the B.C. system can move to assigning PENs at the applicant stage across all sectors. If this is successful, the availability of other unique applicant identifiers would not be crucial, and the burden of assigning unique identifiers at the analysis preparation stage would be reduced to some relatively straightforward PEN validation procedures.

Table 2: Availability of Previous Institution Identifiers

Previous Institution Identifiers	Available for All Applicants	Available for Most Applicants	Available for Less than Half the Applicants	Not Available For Any Applicants	Not Applicable To My Institution	Don't Know
Applicant's Secondary School GPA	1	4	6	6	2	1
Applicant's Secondary School Name	2	14	2	1	0	1
Applicant's Secondary School Location: Province	2	12	3	1	1	1
Applicant's Secondary School Location: Country	3	10	1	4	1	1
Applicant's Secondary School Graduation Date	2	12	2	2	0	2
Name of Source Institution for Applicant Transferring Credit	11	5	1	0	0	3
Province of Source Institution for Applicant Transferring Credit	7	7	3	0	0	3
Country of Source Institution for Applicant Transferring Credit	8	6	1	2	0	3
Source Institution Program Completion Date for Applicant Transferring Credit	5	2	1	8	1	3

Secondary school Grade Point Average (GPA), if available for all applicants and not just those entering directly from a B.C. secondary school, would provide an indication of the previous academic performance of applicants to each program. This statistic is used by universities to measure the

comparative academic performance of applicants. GPA is also the key statistic used in enrolment management at the universities and will become more important to the non-universities as they move toward an enrolment management model. This move is being spurred by the changing context of B.C.'s post-secondary education system as institutions focus on achieving the long term targets detailed in their recently submitted service plans, and as they also recognize that performance, in terms of outputs (FTEs, completion rates, satisfaction rates, employment rates, etc.), is a function of many variables, including such inputs as applicants' academic achievement.

Table 3: Availability of Application Processing Information

Application Processing Information	Available for All Applicants	Available for Most Applicants	Available for Less than Half the Applicants	Not Available For Any Applicants	Not Applicable To My Institution	Don't Know
Date Application Received by Institution	17	1	0	0	0	2
Semester/Term of Admission Requested by Applicant	15	3	0	0	1	1
CIP Code of Program Applied to by Applicant	13	3	0	2	1	1
Application Fees Paid by Applicant	14	3	1	0	1	1
Application Completed	15	4	0	0	0	1
Applicant Qualified for General Admission	12	3	0	0	3	2
Offer of Admission Sent by Institution to Applicant	15	1	0	1	1	2
Offer of Admission Accepted by Applicant	7	1	3	5	2	2
Offer of Admission Declined by Applicant	7	1	3	5	1	3
Offer of Admission Expired	4	0	3	5	5	3
Was Applicant Placed on a Waitlist?	8	1	2	3	4	2
Number of All Credits Transferred to Institution	14	2	0	2	0	2
Number of Post-Secondary Transfer Credits Transferred to Institution	15	2	0	1	0	2
Number of Other Credits Transferred to Institution	12	3	0	1	1	3
Institution's Internal Code Identifying the Basis of Admission for Applicant, e.g. transfer student, direct entry, prior learning assessment, advance placement, international baccalaureate	10	1	0	2	3	4
Applicant Deemed Eligible to Register by Institution	16	1	0	0	1	2
Applicant Attempted to Register	3	1	0	4	4	8
Semester/Term Admission Applicant First Registered	18	1	0	0	0	1
Date of Registration	17	1	0	0	0	2
CIP Code of Program in which Applicant was First Registered	11	2	1	2	2	2
Institutional Course Code in which Applicant was First Registered	14	1	0	0	2	3

The identifiers that institutions indicate have the most coverage in terms of availability for undergraduate and applied program applicants are the following: date application received,

semester/term of application, application completed, offer of admission sent, number of credits transferred and semester/term of registration.

These data, together with the use of PENs for all applicants, would provide a system overview of the applicant process. Resolution of institutional inconsistencies in creating these data, plus the provision of 'program of applicant' and 'program of registration' categories, would then provide non-universities with the program specific information they require to maximize use of the results in operational decision-making.

6.4. Suggested Elements of a Successful Expansion

The following factors were suggested as being important to implementing a successful and long-term, sustainable expansion of applicant studies, as quoted verbatim by survey participants:

Strategic Context

"Create a positive project culture, such as that of the College and Institute Student Outcomes Project (OWG), whereby institutions have input, analysis is performed under institutional researcher control, and participants accept the findings."

"Obtain institutional cooperation and participation from all sectors."

"Take baby steps. Continue with a phased expansion. Keep it simple."

"Determine the questions to be answered by any future study beforehand and build the study around answering those few questions well."

"Gather all the available summary data from the non-universities and frame the study around providing information that complements what is already known."

"Ensure institutional control through a steering committee composed of institutional representatives to determine project scope and priorities and create protocols for data usage and interpretation."

Quality of Analytic Model

"Obtain Provincial Education Numbers (PENs) for all applicants."

"Document all institutional applicant data processes, procedures, definitions and terms."

"Develop a new data model that integrates the college, institute, university college and university perspectives rather than forcing the non-universities into a data model developed for the universities."

"Ensure that results are meaningful and used by the AVED (B.C. Ministry of Advanced Education) and institutions for decision-making. Ensure the results provide information on multiple applications, applicant flows and mobility."

Ease of Participation

"Simplify submission to ensure maximum participation."

"With ministry providing the necessary support to colleges, they will be able to fully participate."

"Charge a small portion of the applicant processing fees to support the project."

6.5. Potential Models for Expanded Applicant Data Collection

Respondents were asked for their opinions on the advantages and disadvantages of the following models for moving ahead. Each model is first described briefly below followed by comments received verbatim about that model and a summary/synthesis of findings.

6.5.1 An Ad-hoc, One-off Submission

This model would continue with the ad-hoc, one-off submission of data by institutions leading to exploratory research that has characterized previous BCCAT-funded applicant studies. This model does not rely on any systematic means of collecting and analyzing data.

Advantages:

- *"Low cost."*
- *"Fits in if applicant flows do not change that much and data is not needed every year."*
- *"Better than nothing."*
- *"An easy option for institutions who are already participating."*
- *"A good model for assessing viability, uncovering anomalies, issues and problems."*
- *"Would get results faster than starting over."*
- *"Has worked well for a number of years."*

Disadvantages:

- *"Use is limited without trend information over time. May have to do this two or three times to get value. Institutions are in such a volatile situation that they need multiple years."*
- *"Only do this if 'good data' can be captured from the expansion institutions."*
- *"Project management of 28 submissions would be onerous."*
- *"Does not provide a common analytic approach to provide year-on-year data."*
- *"University model is already established that may not fit colleges well."*
- *"Submission too onerous. Policy questions were not developed in advance. The data does not tell us anything that could not be inferred from available summary information."*
- *"The return on investment is reduced if only a one-off project. Timeliness of results will be a factor. Getting aged analysis will provide little value for institutions who plan to use the results."*
- *"Goes against the need to resolve issues systematically."*
- *"Implies the study is not repeatable."*
- *"Data has to be current to facilitate decision-making and meet the operational needs within the non-universities."*

Summary and Synthesis

The purpose of this study is to determine which model can meet the long-term needs of the system. For the institutions included in the proposed expansion, return on investment comes from system-wide, timely, accurate applicant data being available at the program level and on an annual basis, either in real-time or soon after registration in the Fall. By definition the ad-hoc model will not meet these needs as it focuses on a one-time only strategy. In the short term, however, before any further data is collected, a one-time-only phase that could be classified as "ad-hoc" is necessary. This phase would assess the strategic context of the project and identify questions that need to be answered and the amount of information that is currently available. This would produce a proposed data model, submission file format and short and long term models for submission, analysis and reporting of system-wide applicant data. Necessary actions emanating from this phase include documenting applicant processes, procedures and terminology at expansion institutions and possibly some business process changes at expansion institutions before a call for data can be issued. This would be a one-off preparatory project phase that would lead to more consistent applicant data collection, analysis and reporting.

6.5.2 Add Applicant Data to an Existing Submission

Since the demise of the Link File there have been no ongoing, system-wide, student-level data collection projects. Currently there are two student-level data projects that form the basis of sectoral reporting. The first is the Central Data Warehouse (CDW) which focuses on collecting student identification, program, course and completion data from all the colleges, institutes and university colleges. The second is the university sector's "Grade 12 to University Transition – Applications and Registrations Tracking System" (GUT) project that collects student identification, university application and registration information on B.C. grade 12 graduates. Participants in GUT include UBC, SFU, UNBC, UVic, and the B.C. Ministry of Education.

Advantages:

- *"It's good in theory. Adding to GUT could work."*
- *"Would only want to backpack onto a BCCAT project."*
- *"Appealing as may take less time to submit but not if housed at Ministry."*
- *"Using existing projects would provide a level of rigour and established data model and project practices, e.g. GUT project has agreements regarding protection of stakeholder interests with the Ministry of Education regarding the integration of grade 12 data and the project has a relationship with government based on non-interference. Future participants would have to accept the existing protocols."*
- *"Great idea because it will give us trend data. Needs an analysis of what would be collected, stored and when. Should be a flexible enough structure."*
- *"GUT project is a select group that could be expanded to whole system. BCcampus could flow or pass data to Data Warehouse."*
- *"If data model could be developed to include all institutions, find the college piece and add this into the Data Warehouse. GUT could then access the data via its proposed link to the Data Warehouse."*
- *"The GUT project plans a potential virtual connection to the Data Warehouse."*

- *"Piggybacking on an existing system makes sense. It would be just a case of adding tables. The GUT model may be the way to go although the standards developed for the universities may not apply to the college sector."*
- *"This is more systematic. Maybe in the context of the Data Warehouse there is some ability to pull it off."*
- *"The Data Warehouse could do this with relative ease. GUT sounds attractive. There are some pluses if the universities are playing a leadership role and can help overcome the data challenges. Checks and balances can be used to overcome colleges feeling threatened (by a university based model)."*
- *"Bringing together the Data Warehouse (DW), K-12 system and GUT will get some pretty strong benefits. Anytime there is an opportunity to provide Data Warehouse payback (to the system) will increase the value of the Data Warehouse. The focus is the data definitions which is looked after in GUT/DW."*

Disadvantages:

- *"So much has to come together along with the PENs to enable this to happen."*
- *"Data has to be current to facilitate decision-making. After-the-fact submissions are interesting but it has to be current to support institutional decision-making."*
- *"Backpacking on another project may mean this project becomes the poor relation. Connecting to the Data Warehouse is not good as the people running the Warehouse do not know the factors behind the data."*
- *"The way people have tended to organize their applicants, e.g. classifying students differently because institutions have set up differently. To make this (model) happen we would have to do a lot of standardization. We may as well go for an all-in-one system but too significant a cost would be involved."*
- *"Only works if data not housed at Ministry. There is less concern if housed at an institution or BCCAT."*
- *"Only do this if "good data" can be captured from the expansion institutions. Two massive datasets may be challenging to integrate. Universities traditionally have concerns when their data is merged with other sectors re: jurisdiction and data ownership."*
- *"Universities are not part of (Data Warehouse) structure. Integration with the GUT project makes sense."*
- *"If the data goes to government, the institutions have issues over governance and who will have access."*
- *"Developing a suitable data model may be difficult, given the diversity of the college sector."*
- *"Data Warehouse unwieldy, has no University information, too costly to modify. GUT has secondary school data and secondary school to university application data, but needs to be expanded to include application data from secondary to post-secondary system and from post-secondary system to University."*
- *"MSTL (B.C. Ministry of Skills, Training and Labour) control of database would not be analysis centric. Submission could be onerous."*

- *"The GUT model may need to be modified to include colleges and institutes. The standards developed for the universities may not apply to the college sector where there are multiple/continuous intakes, program-specific admissions procedures and entrance pre-requisites. There are many other peculiarities of the system that need to be addressed."*
- *"Data is not timely. The nearer to real time (that the data is available) the more valuable the data will be regarding operational issues."*
- *"The Data Warehouse may not be the most expedient and efficient way. Some colleges may feel threatened (by the GUT model). Is it neutral? Is it the system-wide perspective?"*

Summary and Synthesis

The prospect of integrating with existing projects is attractive. However, for the expansion institutions to receive full return on their participation, results would have to be timely and accurate.

The CDW project has been characterized by data collection and storage rather than by data analysis and maximizing return on investment to the Ministry and participating institutions. Hence, successful integration with the CDW requires that this project undergoes a cultural shift to extend the current reporting summaries to a more timely and detailed set of reports.

The limitation of the GUT project lies in its title, "Grade 12 to University Transition". Therefore, for the GUT project to play a central role in a system-wide study, the project would require a formal expansion approved by its steering committee and participants. In addition, GUT can be characterized as exploratory research into applicant behaviour, and the provisions of the research agreement between the participants and the Ministry of Education may restrict the project to this activity. It is operationally relevant, timely information rather than basic research for which expansion institutions have the need.

The fact that there have been discussions on a direct connection between GUT and the CDW illustrates that these projects are moving in a direction that would benefit a system-wide applicant study. Once this connection is implemented and tested, and if non-university applicant data is added to the CDW, then an expanded applicant study would be feasible, provided all the pre-data collection barriers have been overcome and the results are timely, accurate and detailed by institution and program.

With regard to submitting university applicant data to any future expanded study, a separate submission process makes no sense if the GUT project timelines meet the needs of the expanded study and the GUT project can supply the data needed by whatever analytic model is chosen that integrates the perspectives of the universities, university colleges, colleges and institutes. For the non-universities the focus is on the assessment of data quality, applicant business process consistency and the creation of an analytic model that would reflect their perspective. Once the submission stage is reached, the question becomes "What is the best model to collect the data, integrate with the university data and proceed with the analysis?". Adding an applicant table to the CDW submission process may ease the burden of submission for the non-universities.

6.5.3 Create a New "Omnibus Submission" to Replace All Existing Submissions

Current data submission projects prove burdensome to all institutions. The effort involved in providing submissions to the CDW, Ministry headcount and FTE reporting requirements, the GUT project, the

student outcomes projects and BCCAT research projects probably requires at least one dedicated FTE staff member at each institution and agency. Therefore, a conservative estimate of 30 full-time staff across the province represents an annual system investment of over $1.5 million to extract, submit, integrate, analyze and report the ensuing data. The rationale behind an "omnibus" submission is to integrate these data demands into a single submission to minimize the resources required.

Advantages:

- *"May be good to reengineer and remodel data flow from scratch rather than remold existing projects."*
- *"One system for the entire province. Only move to this once the project has moved from ad-hoc to piggybacking on another project/initiative."*
- *"Conceptually not a bad idea. How practical is it?"*

Disadvantages:

- *"This would be the same problem as the Data Warehouse. Until everybody's data systems are good enough there won't be any sharing of universities' data into a central database."*
- *"Data has to be current to facilitate decision-making. After-the-fact submissions are interesting but it has to be current to support institutional decision-making."*
- *"This is a special kind of study and being a component (of something larger) might not do justice to it. You lose a certain flexibility of deadlines etc. by being tied to one big project."*
- *"May be onerous. Need to walk before running."*
- *"Too big, would get stalled. Need to use baby steps to move forward and expand in a modest way. Does not use an existing framework. Institutionally it is easier to accept an adaptation of an existing project. This would be a big strain on resources."*
- *"Don't know if there is the desire in the system. Do we have to rebuild something or can we do things to integrate (existing mechanisms)?"*
- *"Great but probably expensive to homogenize."*
- *"The requirements of the Data Warehouse (are) already too much so the prospect of something bigger will not work."*
- *"To go directly to this from the ad-hoc model is tough to do. Need to determine the cost, political issues and will."*
- *"It would be preferable to fold the project into the Data Warehouse."*
- *"Makes me nervous due to the work involved in creating a mammoth submission. There are simpler ways. This will be more complicated."*
- *"The problem is that the Data Warehouse has soured government on getting everything at once. It took such a long time to get up and running."*

Summary and Synthesis

The CDW and the Link File have each attempted an "omnibus-type" submission without providing a return to stakeholders for the effort involved. The effort required to integrate institutional information

for the purpose of creating a database that supports analysis to the program level is huge. The Link File failed due to the quality of the record linkage and project management that became disconnected from the needs of the stakeholder institutions. The CDW has been slow to provide detailed analyses due to a lack of analytic capability at the Ministry of Advanced Education and also to institutional distrust of Ministry analyses.

The desire within the system is to build upon what has already been achieved and to do so in phased, short-term steps that build to the long term. Creating a new omnibus submission appears to be impractical, unnecessary and unwieldy.

6.5.4 A Direct Connection Between Institutional Databases

Across the system, institutional databases are independent islands whereby interaction between them consists of little more than batch data exports to an external location that characterizes existing projects such as the Student Outcomes surveys, the CDW, the GUT project and BCCAT ad-hoc analyses. Technology has developed such that this does not have to be the case. Oracle, for example, has developed server-linkage facilities that potentially allow databases to be integrated, eliminating the need for batch imports and exports of data. The potential of this technology is being reviewed by two B.C. post-secondary initiatives:

1) BCcampus is planning a re-write of the PASBC application, and one of the features under consideration is adding Provincial Education Numbers (PENs) to all applicants. It is hoped that investigating the development and implementation of "institutional connectors" will lead to providing the capability of requesting, sending and receiving applicant data between institutions and BCcampus. The PEN will be used to uniquely identify students in order to facilitate an automated admissions process and transfer of academic history between institutions. Initially this will be implemented at four pilot institutions: Camosun College, the University College of the Fraser Valley, Kwantlen University College and the College of the Rockies. Eventually, BCcampus expects to use these "institutional connectors" to transfer applicant data to all institutions.

2) Similarly, the GUT project is reviewing the potential of this technology to eliminate the need for universities to provide extracts of their data before sending these on to a central location across the internet. If proven, this technology will impact all projects which include a data submission component, including the CDW.

Advantages:

- *"It is doable but requires an awful lot of institutional and departmental cooperation. This is the better way to go."*
- *"This is the only option we would support as the data would be current to support decision-making."*
- *"This is worth serious investigation. I assume this also needs PENs and (the value is in) the more you can tie in different sources of data such as Ministries of Education and Advanced Education."*
- *"The obvious advantage is that this is standardization. I am philosophically in favour. There would be a core set of things we would all have to agree on. I would support this."*

- *"Great if it can work. Would be very difficult for us with our old software."*
- *"This is where everything should be going. We call it a data cube and it sits on top of our human resource, finance and student records systems to provide all the reports for decision-making."*
- *"Removes onerous nature of submissions."*
- *"Would require everyone to standardize on their definitions. For example, (one institution's) definition of 'direct entry' is different than that of colleges, which is also different from universities. There are many examples, and this project will encourage institutions to standardize their definitions."*
- *"Sounds good in theory. If it can work well, it is fine."*

Disadvantages:

- *"This forces institutions to store and process their applicants in the same way."*
- *"None as long as the capability is there."*
- *"Do not know how this would work. What is BCcampus planning to do?"*
- *"Do not know enough about it."*
- *"Only do this if 'good data' can be captured from the expansion institutions. Technology has not been proven. Connecting transactional systems is unstable. The advantage of data dumps is that these are snapshots where results of queries will not change overnight."*
- *"Only send transactional data in real time if it is needed in real time."*
- *"In an ideal world there would be no disadvantages if everyone had admission processes, business practices, systems and decision-making defined the same. It is more difficult for institutions to standardize business practices than to create a standardized dataset. Also, standardization of business process and definitions may not be appropriate where there are diverse programs and learners and could result in increased processing costs for institutions."*
- *"How much do the IR offices necessarily clean data at the moment? This process would be lost in a direct connection."*

Summary and Synthesis

Considerable standardization of data definitions and business practices would need to occur before the advantages of this technology could be fully realized. As the use of data transfer technology is relatively untested and unknown in the B.C. post-secondary system, results of the investigations into this technology by BCcampus and the GUT project will be very interesting.

If BCcampus tested and implemented the technology and PASBC succeeded in becoming the conduit for providing PENs to applicants, then timely analyses of multiple applicants could be produced by institution and by program throughout the application process early in the Fall term. This PASBC data file could also be added to the Data Warehouse and the GUT project. If PASBC became the gatekeeper for all applicant processing, then much of the inter-institutional process inconsistency could be eliminated.

6.5.5 Handling Applicant Data Inside vs. Outside of the Public Education Sector

The following verbatim quotes deal with the perceived advantages and disadvantages of handling applicant data both inside the public education sector (e.g., BCCAT, an individual institution, GUT/Data Warehouse) and outside the public education sector (e.g., BC Student Outcomes currently housed with B.C. Stats).

Advantages of Handling Applicant Data Inside the Public Education Sector:

- *"Interpretation is better. The only reason it got done last time is because it was triangulated between SFU and (the universities)."*
- *"Somebody should do it who is ultimately under the Minister's control to ensure that privacy and institutional cooperation issues are dealt with."*
- *"You do need some coordinating mechanism that ensures continuity and is informed by people who have a day-to-day understanding of the post-secondary system."*
- *"Credibility. Sensitivity and understanding of the issues – what we've done and where we've been. We need to draw on our institutional research expertise."*
- *"Interpretation less subject to political pressures."*
- *"It is important to keep the handling on the inside for institutional buy-in."*
- *"This creates comfort as we understand ourselves."*
- *"Good if under institutional control."*
- *"It is good that BCCAT is coordinating research into transfer and articulation as they are not just college based and have expertise, reputation and focus. A component missing is private institute participation. Including private schools provides a holistic picture."*
- *"Instinctively this should be inside."*
- *"The first choice is that the organization has tie-in to the institutions. Because of the way the legislation is written, e.g. the Ministry cannot interfere with admissions and transfer, it is preferable to keep the organization at arm's length. We need to avoid bureaucratic influence. Maybe it would be better to not use the Data Warehouse, as we do not want the Ministry looking at individual data. We need the firewalls in place to ensure the protection of (stakeholder) interests. The role of the bureaucrat it to ensure that ministers obey the law."*
- *"Past experience suggests my preference is for inside so that there is an opportunity for more input and control."*
- *"Protecting student data."*
- *"The same organization that administers the CDW would be a logical choice to support the infrastructure required."*

Disadvantages of Handling Applicant Data Inside the Public Education Sector:

- *"Questions of autonomy and policy."*
- *"Fails if not under institutional control."*

- *"BCCAT probably does not have the technical infrastructure to handle this so therefore use of existing structure, i.e. the Data Warehouse irrespective of who is managing the Data Warehouse."*

Advantages of Handling Applicant Data Outside the Public Education Sector:

- *"The only reason to go outside is if there is a credibility issue or if someone external is required to cut through institutional issues."*
- *"Can work if stakeholders have equal control."*
- *"There is comfort in having qualified people involved. The outcomes project has reached a level of maturity which this project could reach."*
- *"Applicant data is an 'input'; therefore it should be handled within the education system, as opposed to outcomes which are an output and B.C. Stats is a good location for that project."*
- *"Possible."*
- *"Can work if under institutional control."*

Disadvantages of Handling Applicant Data Outside the Public Education Sector:

- *"I would prefer to see it tied to an organization that is close to students."*
- *"It would be a mistake to go external."*
- *"Protecting student data."*
- *"It depends on whose data it is (and) what we want to do with it. The main focus is the details of the agreement with the organization running the project that clarifies the owner of the data, what can be done with the data, etc."*
- *"Outside people may not understand aspects of B.C. colleges, especially if they have lived in other provinces. Colleges are constantly having to correct misperceptions of both our mission and our operations."*
- *"Fails if not under institutional control."*
- *"It should only be outside if institutions cannot trust each other and get their act together."*
- *"I wouldn't rule this out but past experience suggests my preference is for inside so that there is an opportunity for more input and control. The colleges support B.C. Stats in handling the College and Institute Student Outcomes Project but they took key staff with project experience."*

Summary and Synthesis

The project needs input and participation from all institutions. Data management and analysis need to be under their control. Whichever model is chosen needs to reflect this. Given the history of failure of various system data analysis projects, institutions feel much greater comfort knowing the organization handling the project is seen as being "on the inside".

Regarding the analysis and reporting of data, there is currently no obvious group that could provide these services. The SFU Office of Analytic Studies has played a key role in developing the studies beyond the university sector into the university colleges but the time has come to pass the baton. Neither BCCAT nor the Ministry of Advanced Education nor BCcampus has the analytic firepower to

support the needs of system-wide projects over the long-term, although that does not discount any of these organizations investing resources in this area as a strategic priority for the future.

At the moment the GUT project limits its focus to analysis of the universities and Ministry of Education. If this project expands its mandate to include other sectors and applicants beyond those from B.C. secondary schools, then a cross-sectoral analytic steering committee with UBC's Office of Planning and Institutional Research analytic team would be potent, but it would have to meet the needs of the project tasks and timelines, a burden that may be beyond a single institutional research office, as the SFU office has discovered.

Since the 1990s this type of project would have been undertaken by public agencies such as B.C. Research, the Strategic Information Research Institute and the Centre for Education Information Standards and Services. With the demise of these organizations, a vacuum has been created while the need for dedicated resources providing analysis of the B.C. post-secondary system remains. Consideration may be given to B.C. Stats, who have successfully taken over supporting the analysis needs of the B.C. College and Institute Student Outcomes Project. Alternatively, many private sector research and consulting companies will have the expertise if not the direct experience to handle such a complex project, although institutional concerns on working with an "outside" provider would have to be taken into account.

6.5.6 Respondent Suggestions Regarding Next Steps

The following verbatim quotes represent the advice from respondents regarding potential next steps in conducting broader applicant flow studies.

Project Management

- *"Phased expansion/Start with baby steps/Ad-hoc/Focus on what is doable."*
- *"Start small with provision for phased expansion rather than doing it all at once. Focus on BCCAT demonstrating utility as BCCAT is viewed as neutral and respected. If utility and feasibility could be demonstrated, then colleges would consider any of the models."*
- *"Get institutional buy-in/participation of all sectors and agencies/input into data plus management/development of project."*
- *"Have centralized, dedicated support."*
- *"Develop a steering committee including universities, university colleges, colleges, institutional researchers and registrars to look at what we (learned) and what problems we encountered and determine questions, identify benefits/objectives."*
- *"Do an analysis of where we are, the available resources and what (solution) would be the best fit. Have a group of vice presidents, presidents, deans, registrars and institutional researchers get together for a half day workshop to determine why we would do this and what we want to achieve."*
- *"Develop a working task group including universities, university colleges, colleges, institutional researchers and registrars to take the thinking and understanding of all the processes and determine what we would have to request (from the institutions) to get likeness."*

- *"BCCAT needs to come back with potential components of expanding an applicant study to all institutions including addressing the development of system definitions with data specifications clearly set out and deadlines."*
- *"Tough to say, we (the college and institute sector) don't know how the BCCAT studies have worked out. This initiative needs to (be) simplified, rather than starting with the development of a complex and costly infrastructure. (Our institution) does not yet understand the value that could be derived from the ongoing research."*

Scope of Expanded Study

- *"Identify questions that need to be answered."*
- *"Gather all the available summary data from the non-universities."*
- *"Determine which questions can be answered with available data."*
- *"Ask for the minimum number of data elements that answer a few questions well."*
- *"Include apprenticeships."*

Data Quality

- *"Expansion would not be useful if the caveats could not be removed."*
- *"Determine if reliable data can be captured from the institutions."*
- *"Conduct rigorous study of processes at different institutions to define definitions and plan analysis."*
- *"Determine and document the application and admission processes and terms used at all non-universities. If all applicants are admitted at colleges, then I would just focus on analyses of registrants."*
- *"If a system body, e.g. PASBC, could impose procedural regularity and get truly comparable data, that may be the best option. The nearer to real time (that the data is available) the more valuable the data will be regarding operational issues. Use whichever model moves the data to real time, closer to the operational sequence."*
- *"Identify recommendations to the colleges, university colleges and institutes (on) how to refine systems and business practices to provide the necessary quality data."*

Data Analysis Model

- *"University model is already established that may not fit colleges well. Redevelop model to fit universities and colleges."*
- *"Develop model to include college perspective. Redevelop the project model to integrate the various concepts of admissions at the colleges, e.g. in open enrolment, limited enrolment and continuous entry programs with the universities, i.e. a model that reflects all institutions. Ask for the minimum number of data elements that answer a few questions well."*

PEN Availability

- *"It would help if PENs were available earlier."*

- *"Use PASBC/Ontario funnel model to get PENs for all applicant prioritization data and standardized data."*
- *"Go through a PASBC funnel like Ontario if the institutions can agree to this. Maybe select a few key large programs, business, nursing etc. to implement this."*
- *"The implementation of a direct connection between a potential system applicant database and institution databases using data transfer technology. Use PASBC (BCcampus) in gaining PENs for all applicants. The data would then be current to support decision-making."*
- *"All applicants flow through a central point of access and information is shared with all institutions. If the current model is used (PASBC and institutions processing applications), then there needs to be a parallel system to create an applicant record in a central database."*

Data Collection Model

- *"Determine which model is simplest and would provide reliable information in a timely manner."*
- *"Whatever model is timely and moves the data to real time, closer to the operational sequence. Get a system body to provide the funnel for applications that could eliminate the issues of procedural incompatibility."*
- *"Not the ad-hoc option; over the long haul it would wear everyone out. We need to build on the strengths and tools that exist."*
- *"Stand alone system."*
- *"Use the GUT model of virtual Oracle database connections to integrate the data at each institution."*
- *"Integrate project with existing projects (GUT/DW)."*
- *"Perform pilot projects supported by centralized, dedicated and local expertise. The location of this centralized support does not matter. Use the pilot to get a feel for how this could work. (We) would like to participate in the pilot. I think this project is really important and needs to be supported by the system for system planning. I will continue to push for this."*
- *"I would be confident if BCCAT was involved. The mechanisms are secondary. As long as we have institutional buy-in and the data are available. Integrating existing projects is good. The GUT project is interesting."*
- *"Use existing sources. Anything that uses the Data Warehouse is seen as positive. Analysis and reporting: if there is the participation of all institutions, clear definitions and clear expectations of what questions you are trying to answer – this will clarify the model."*
- *"I have been in favour of a central data warehouse type idea. The virtual central system should be investigated. Carrying on ad-hoc could be made to work but down the road the virtual connection is the way to go. We shouldn't take too short a term on this. Institutions should coordinate a few core things with flexibility on the edges."*
- *"Determine if 'good data' can be captured from the expansion institutions. Go with expansion of GUT project with the non-universities determining whether applicant data is added to Data Warehouse or submitted directly to GUT project."*

- *"I would look at what we currently have, e.g. BCcampus, BCCAT and increase capacity in some (necessary) areas. Can we expand and elaborate on these? Whatever has the most representation from all sectors."*

Results Reporting

- *"I like the way SFU does it so that institutions can review data before it is released by BCCAT. For the universities this is somewhat interesting. I wouldn't want to invest a ton of time."*
- *"Provide analysis capability over web."*
- *"Reports in real time/short term."*

7. Summary of Key Findings and Conclusions

A number of important themes emerge from the wealth of data collected from the interviews and questionnaire. These themes are listed below and should inform any work that follows on expanding applicant flow studies.

- Whichever approach is decided upon regarding expansion of applicant flow studies, it is important to proceed carefully and incrementally rather than attempting a system-wide overhaul of database structures and institutional procedures.
- The studies of applicant flows must provide current and timely information, preferably at the program level, to support institutional decision-making. Institutions to be included in further research expansion indicated they are not interested in research that is purely exploratory, preferring research which is useful in meeting their institutional goals.
- It is important to determine, clearly and up front, what information is required from an expanded applicant flow study.
- The research model to be developed should apply to all post-secondary sectors rather than attempting to have the university model of applicant flow studies fit other types of institutions.
- The approach used should be systematic and would ideally integrate over the long term with existing projects such as the Grade 12 to University Transition – Applications and Registrations Tracking System (GUT) and the Central Data Warehouse (CDW), rather than continuing the one-off, ad-hoc efforts of the past. This can be achieved if these existing projects can evolve to meet the data submission and reporting requirements of B.C.'s university colleges, colleges and institutes. If this cannot happen then integration may focus solely on the data collection phase with a stand-alone solution to meet the analysis and reporting requirements of the expanded applicant study.
- The lack of common definitions, comparable data and business processes among institutions and sectors must be addressed before proceeding with further studies. Realistically, this can be accomplished by keeping the studies as simple as possible, thus requiring minimal standardization of data definitions and processes.
- It is crucial that PENs be applied at the applicant stage in order to make the tracking of applicants across institutions and sectors more feasible and resulting information more robust. Without universal application of the PEN, studies would need to rely upon labour intensive

record matching using other student identifiers (e.g., name or birth date) to ensure unduplicated headcount for students without PENS.

- Certain key data elements are almost universally available for all or most applicants at most institutions. An expanded study that focuses on these key elements may be possible without a lot of work on the part of institutions. This study suggests that the following fields, though not universally available, are commonly accessible, and would provide a good starting point: 'date application received', 'semester/term of application', 'application completed', 'offer of admission sent', 'number of credits transferred' and 'semester/term of registration'.

  Depending on the questions for which the analysis is aiming to provide answers, these data, together with the availability of PENs for all applicants, would provide a system overview of the applicant process. Inter-institutional inconsistencies could be resolved by focusing on the creation of the above fields, with the addition of two more fields where applicable, 'program of applicant' and 'program of registration', that would supply non-universities with the program specific information they require to maximize effective use of results in operational decision-making.

- Any future research project should be managed through a steering committee and possible working committees representing the various post-secondary sectors. Ownership of the process and the results by the post-secondary system is deemed crucial to a successful endeavour.

- It is necessary to have some group or agency, preferably within the public education sector, coordinate the expansion of applicant flow studies and provide centralized support. This will not be possible without dedicated resources.

8. Recommendations

This study has confirmed the need for a broader understanding of applicant behaviour across all sectors. For the universities, this need falls into the 'nice-to-know' category. Their operational needs are already being met through the analyses performed by SFU's Office of Analytical Studies, and their needs for exploratory research will be met by the GUT project led by the Office of Planning and Institutional Research at UBC.

For the non-universities the expansion is much more vital due to the changing circumstances under which they operate. These include the move towards information-based decision-making, increased recognition of the need for system perspective, implementation of performance measurement, focus on student outcomes and focus on annual service plans. Accessing system-wide applicant data at the program level will help them manage their intake; understand their community, regional and provincial dynamics; measure demand more effectively; and determine how they adapt to meet the demands of a changing client base. Having confirmed the need for research expansion, the next phase is to assess how best to move forward.

The initial priority of the expansion project should not be to collect more data. It is recommended that the first phase focuses on establishing system-wide support for a work plan that ensures that data supports the analysis necessary to answer the questions, which are yet to be clearly defined. The purpose of this initial phase is not only to secure formally the system's support for moving ahead but also to identify the questions that need to be answered, the best mechanism for proceeding, and the

resources required for managing the project from data collection right through to reporting. Tasks to be included in this first phase are the following:

- BCCAT, with the support of its Admissions Committee, should form a small steering committee with representatives from all public post-secondary sectors to determine the scope of an expanded applicant flow project and the preferred mechanism for completing it. The steering committee would base its work on the results of this feasibility study.
- The steering committee would identify and refine the questions that need to be answered in order to be of use to all institutions and the system as a whole.
- The steering committee would define the data elements, data specifications and analytic model required to generate the required information.
- The ability to assign PENs at the applicant stage to all applicants must be realized and implemented before proceeding with any data collection phase.
- The steering committee would determine the best mechanism for data collection and analysis that makes use of existing database structures.
- The steering committee would then recommend which body should take on the task of coordinating ongoing applicant flow studies and what the resource requirements would be.

Once system support has been secured, a coordinating body has been chosen, resources have been allocated, questions have been identified, issues relating to the quality and consistency of the underlying institutional data and processes have been resolved and PENs have been implemented for all applicants, the coordinating body, with the guidance of the steering committee, would develop a work plan identifying the timelines, tasks and responsibilities of each stakeholder to ensure successful implementation of the project.

Appendix A. Project Timeline

1. Review past project reports and data collection models	April 30, 2004
2. Identify key issues requiring exploration	May 15, 2004
3. Create discussion outline	May 15, 2004
4. Identify sectors and representatives to be interviewed	May 15, 2004
5. Set up phone/in-person interviews	May 21, 2004
6. Web questionnaire	May 27, 2004
7. Conduct phone and in-person interviews	Jun 15, 2004
8. Web survey data collection	Jun 15, 2004
9. Web survey data analysis (initial)	Jun 16, 2004
10. Interview data analysis (initial)	Jun 16, 2004
11. Draft report summarizing findings	June 30, 2004
12. Final report	July 15, 2004

Appendix B. Interview Outline

Introductory Text:

Studies have been conducted for a number of years to determine the flow of direct entry applicants from B.C.'s secondary schools and transfer applicants from B.C. colleges and institutes to B.C. public universities and university colleges.

BCCAT is now embarking on a feasibility study to determine if such applicant flow studies can be expanded to a broader set of post-secondary institutions. The central component of the feasibility study is the conducting of interviews with institutional researchers, registrars and executive administrators across all sectors of the B.C. public post-secondary system to determine the need for and barriers to the expansion of applicant studies and how best to move forward. I am an independent consultant and have been hired to conduct these interviews.

The interview will last approximately an hour and is structured into 3 parts. The first will gather your opinions on the need for system-wide student level information. The second will reflect on potential models for carrying out applicant data analysis and the third will focus on your recommended next steps.

Responses will be kept confidential and if featured in the final report will not be attributed by name.

Issue 1. The Need for Expanded System-Wide Applicant Data

Q1. What are the potential advantages and disadvantages to your organization of having a broader understanding of applicant demand on institutions and the system as a whole?

Q2. For what specific decision-making processes would your organization use B.C. system-wide applicant data?

Q3. What are your main concerns about the submission, analysis and reporting of student level system-wide applicant data?

Q4. What do you see being the main costs to your institution involved in submitting, analyzing and reporting system-wide student level applicant data?

Q5. What do you consider to be the main factors in implementing a successful, long term sustainable expansion of applicant studies?

Issue 2. Potential Models for Data Collection, Analysis, Reporting and Storage

Q6. What do you think are the advantages and disadvantages of the following models for student level applicant data collection?:

a) An ad-hoc, one-off submission, e.g. current BCCAT/SFU applicant study project.

b) Add applicant data to an existing submission, e.g. adding applicant data to the college/university college/institute Data Warehouse submission requirements or adding non universities to the Grade 12 to University Transition (GUT) project.

c) Create a new "omnibus submission" to replace all the institutional ad-hoc submissions covering applicant and other student level data that meets the needs of all system projects such as the Data Warehouse, the GUT project, Ministry headcount/FTE reporting requirements and BCCAT ad-hoc transfer analyses.

d) The implementation of a direct connection between a potential system applicant database and institution databases using data transfer technology (current BCcampus model)

e) The handling of applicant data completely inside of the public education sector, e.g. Current BCCAT/SFU/GUT/Data Warehouse project models.

f) The handling of applicant data outside of education sector yet under stakeholder control, e.g. Current Student Outcomes/B.C. Stats survey/B.C. Research/SIRI project models.

Q7. What is your preferred model for the following: data submission, data analysis, data reporting and data storage for an expanded applicant study across all sectors of the B.C. public post-secondary system and why?

Issue 3. Future Steps to Implementation

Q8. What are your overall recommendations on how the system could proceed with the implementation of a successful expansion of the applicant study to all institutions?

Appendix C. Data Collection and Analysis Questionnaire

Previous analyses have determined the flow of direct entry applicants from B.C.'s secondary schools and transfer applicants from B.C. colleges and institutes to B.C. public universities and university colleges. The British Columbia Council on Admissions and Transfer (BCCAT) is now embarking on a feasibility study to determine if such applicant flow studies can be expanded to a broader set of post-secondary institutions.

This feasibility study seeks to gather information from institutional researchers, registrars and executive administrators across all sectors of the B.C. public post-secondary system to determine the necessity of expansion and how best to move forward.

The following questionnaire addresses the availability and quality of applicant data stored electronically at each institution. Please complete the questionnaire and provide any additional comments you, your Director of Admissions and/or your Registrar may have by June 15, 2004. Thank you.

If you have any questions regarding this survey, please contact Devron Gaber, Associate Director, BCCAT Phone: (604) 412-7790 or email: dgaber@bccat.bc.ca

Instructions

The following questionnaire asks respondents to identify which data elements describing applicants are available electronically. Respondents are also asked about the availability of data regarding the application/registration process and collects feedback about extending the applicant study.

Institution _____

Respondent Name _____

Respondent Title _____

Your name and institution are required for tracking purposes only. All information will be kept confidential. Your identity and your responses will not be shared with any other institution, participant of the study, nor any third parties associated with BCCAT other than Martin Butler, the lead consultant on the project.

1. Can you identify electronically all applicants to your institution's 2003/04 undergraduate and applied programs?

- ☐ Yes: Available for all
- ☐ No: Available for most
- ☐ No: Available for less than half
- ☐ No: Not Available for any

Please provide any additional comments concerning your answer to Question 1:

_____

If your answer is "No, Not Available for Any", go to Question 3.

2. For applicants to your institution's 2003/04 undergraduate and applied programs that you can identify electronically, please state whether the following data elements are available?

Unique Applicant Identifiers	Data Element Availability	Comments
Provincial Education Number	☐ Available for all ☐ Available for most ☐ Available for less than half ☐ Not Available ☐ Not Applicable ☐ Don't Know	
Your Institution's Unique Student Identification Number	☐ Available for all ☐ Available for most ☐ Available for less than half ☐ Not Available ☐ Not Applicable ☐ Don't Know	
Applicant's First Name	☐ Available for all ☐ Available for most ☐ Available for less than half ☐ Not Available ☐ Not Applicable ☐ Don't Know	
Applicant's Middle Name	☐ Available for all ☐ Available for most ☐ Available for less than half ☐ Not Available ☐ Not Applicable ☐ Don't Know	
Applicant's Last Name	☐ Available for all ☐ Available for most ☐ Available for less than half ☐ Not Available ☐ Not Applicable ☐ Don't Know	
Applicant's Preferred Name	☐ Available for all ☐ Available for most ☐ Available for less than half ☐ Not Available ☐ Not Applicable ☐ Don't Know	
Applicant's Gender	☐ Available for all ☐ Available for most ☐ Available for less than half ☐ Not Available ☐ Not Applicable ☐ Don't Know	
Applicant's Date of Birth	☐ Available for all ☐ Available for most ☐ Available for less than half ☐ Not Available ☐ Not Applicable ☐ Don't Know	
Post Code of Applicant's Mailing Address	☐ Available for all ☐ Available for most ☐ Available for less than half ☐ Not Available ☐ Not Applicable	

	Don't Know	
Alternative Post Code of Applicant's Mailing Address	Available for all Available for most Available for less than half Not Available Not Applicable Don't Know	
Post Code of Applicant's Permanent Address	Available for all Available for most Available for less than half Not Available Not Applicable Don't Know	
Applicant's Secondary School GPA	Available for all Available for most Available for less than half Not Available Not Applicable Don't Know	

Previous Institution Identifiers	**Data Element Availability**	**Comments**
Applicant's Secondary School Name	Available for all Available for most Available for less than half Not Available Not Applicable Don't Know	
Applicant's Secondary School Location: Province	Available for all Available for most Available for less than half Not Available Not Applicable Don't Know	
Applicant's Secondary School Location: Country	Available for all Available for most Available for less than half Not Available Not Applicable Don't Know	
Applicant's Secondary School Graduation Date	Available for all Available for most Available for less than half Not Available Not Applicable Don't Know	
Name of Source Institution for Applicant Transferring Credit	Available for all Available for most Available for less than half Not Available Not Applicable Don't Know	
Province of Source Institution for Applicant Transferring Credit	Available for all Available for most Available for less than half Not Available Not Applicable Don't Know	
Country of Source Institution for Applicant Transferring Credit	Available for all Available for most Available for less than half	

	Not Available Not Applicable Don't Know	
Source Institution Program Completion Date for Applicant Transferring Credit	Available for all Available for most Available for less than half Not Available Not Applicable Don't Know	

Application Processing Information	Data Element Availability	Comments
Date Application Received by Institution (YYYYMMDD)	Available for all Available for most Available for less than half Not Available Not Applicable Don't Know	
Semester/Term of Admission Requested by Applicant (YYYYMM)	Available for all Available for most Available for less than half Not Available Not Applicable Don't Know	
CIP Code of Program Applied to by Applicant (999999)	Available for all Available for most Available for less than half Not Available Not Applicable Don't Know	
Application Fees Paid by Applicant (Y/N)	Available for all Available for most Available for less than half Not Available Not Applicable Don't Know	
Application Completed (Y/N)	Available for all Available for most Available for less than half Not Available Not Applicable Don't Know	
Applicant Qualified for General Admission Y/N	Available for all Available for most Available for less than half Not Available Not Applicable Don't Know	
Offer of Admission Sent by Institution to Applicant (Y/N)	Available for all Available for most Available for less than half Not Available Not Applicable Don't Know	
Offer of Admission Accepted by Applicant (Y/N)	Available for all Available for most Available for less than half Not Available Not Applicable Don't Know	
Offer of Admission Declined by Applicant	Available for all	

(Y/N)	Available for most Available for less than half Not Available Not Applicable Don't Know	
Offer of Admission Expired (Y/N)	Available for all Available for most Available for less than half Not Available Not Applicable Don't Know	
Was Applicant Placed on a Waitlist? (Y/N)	Available for all Available for most Available for less than half Not Available Not Applicable Don't Know	
Number of All Credits Transferred to Institution (0-999)	Available for all Available for most Available for less than half Not Available Not Applicable Don't Know	
Number of Post-Secondary Transfer Credits Transferred to Institution (0-999)	Available for all Available for most Available for less than half Not Available Not Applicable Don't Know	
Number of Other Credits Transferred to Institution (0-999)	Available for all Available for most Available for less than half Not Available Not Applicable Don't Know	
Institution's Internal Code Identifying the Basis of Admission for Applicant, e.g. Transfer Student, Direct Entry, Prior Learning Assessment, Advance Placement, International Baccalaureate (999999)	Available for all Available for most Available for less than half Not Available Not Applicable Don't Know	
Applicant Deemed Eligible to Register by Institution (Y/N)	Available for all Available for most Available for less than half Not Available Not Applicable Don't Know	
Applicant Attempted to Register (Y/N)	Available for all Available for most Available for less than half Not Available Not Applicable Don't Know	
Semester/Term of Admission Applicant First Registered in (YYYYMM)	Available for all Available for most Available for less than half Not Available Not Applicable Don't Know	
Date of Registration (YYYYMMDD)	Available for all Available for most	

	Available for less than half Not Available Not Applicable Don't Know	
CIP Code of Program In Which Applicant Was First Registered (999999)	Available for all Available for most Available for less than half Not Available Not Applicable Don't Know	
Institutional Course Code in Which Applicant was First Registered (999999999)	Available for all Available for most Available for less than half Not Available Not Applicable Don't Know	

3. Please evaluate the following factors in contributing to a successful expansion of an applicant study to all institutions

Factors	**Contribution to Success**		
Institution's Ability to Accurately Document Data Handling Processes	high	medium	low
Reduction of Data Submission Preparation Time	high	medium	low
Comparability of Data Elements and Data Handling Processes	high	medium	low
Transparency of System Data Validation and Analysis Procedures	high	medium	low
Institutional Input into How Summary System Data is Reported	high	medium	low
Interactive Access to Data Over Web by IR Offices	high	medium	low
Other	Comments		

4. What major concerns do you have regarding the proposed expansion of student level applicant studies to all B.C. colleges, institutes, university colleges and universities?

5. Please Add Any Additional Comments Here

Please ensure you have provided an answer for each question, with the exception of the comments fields, which are optional.

Appendix D. List of Respondents

Our thanks to the following individuals and organizations that participated in this study:

B.C. Colleges

Camosun College	Paul Merner Director, Educational Research & Development
Camosun College	Kate Ross Registrar, President B.C. Registrars Association
Capilano College	Greg Lee President
Capilano College	Itidal Sadek Registrar
College of New Caledonia	Carla Cerina Statistics/Reports Assistant
College of the Rockies	Dianne Teslak Manager, Financial Operations and Institutional Accountability
Douglas College	Bob Cowin Director, Institutional Research
Douglas College	Karen Grigoleit Analyst, Institutional Research
Langara College	W. Larry Xiong Coordinator, Institutional Research
North Island College	Martin Petter Vice-President Education
Northwest Community College	Brian Loptson Registrar
Selkirk College	Marilyn Luscombe President
Vancouver Community College	Deanna Rexe Director, Institutional Research and Planning

B.C. Institutes

B.C.I.T.	Mario Mazziotti Director, Institutional Research & Planning
Emily Carr Institute of Art & Design	Kevin Bird Associate Registrar, Admissions

B.C. University Colleges

Kwantlen University College	Jody Gordon Registrar
Kwantlen University College	Kathleen Bigsby Director, Institutional Analysis & Planning
Okanagan University College	Stephanie Barclay-McKeown Manager, Institutional Research
UCFV	Dale Box Director, Institutional Research and Planning
UCFV	Wayne Welsh Vice President Academic
UCC	Alastair Watt Associate Vice-President, Planning & Administration

B.C. Universities

SFU	Joanne Heslop Senior Analyst, Office of Analytical Studies
SFU	Walter Wattamaniuk Director, Office of Analytical Studies
UBC	Walter Sudmant Director of Planning and Institutional Research
UNBC	Joan Ross Director of Institutional Research
University of Victoria	Tony Eder Director, Institutional Planning and Analysis
University of Victoria	Cled Thomas Administrative Registrar, Admissions & Records

B.C. Post-Secondary System Agencies

B.C. College Presidents	Jim Reed President
The University Presidents' Council	Blair Littler Vice-President
Ministry of Advanced Education	Jacqui Stewart Director of Planning and Data Management
Ministry of Advanced Education	Jim Soles Assistant Deputy Minister
BCcampus	David Porter Executive Director

Appendix E. Glossary

General Terms	Description
Application	The necessary completed paper or web-based forms required for admission to each institution.
Applicant	Any individual who completes the necessary paper or web based application forms for admission to an institution and submits these documents to the relevant institution or organization for processing.
Application Completed	A complete application includes all required documentation and payment of the application fee.
Applied Programs	Applied Programs: providing training, usually of two years or less in duration, for specific occupations, industries and areas of employment. These include apprenticeship programs supplying primarily on-the-job trades training supplemented with several months of classroom instruction each year.
CIP Code	The Classification of Instructional Programs (CIP) is a comprehensive taxonomy of programs of instruction based on subject matter. It was developed by the U.S. National Center for Education Statistics (NCES). It is an accepted standard for the classification of post-secondary education programs in Canada. CIP codes are used by Statistics Canada for its post-secondary data. The B.C. College and Institute Student Outcomes Survey Project uses the year 2000 edition of CIP codes.
Delayed entry students	Students admitted on the basis of B.C. secondary school completion and who entered a B.C. post-secondary institution one or more years after B.C. high school graduation.
Direct entry students	Students admitted on the basis of B.C. secondary school completion and who entered a B.C. post-secondary institution within one year of B.C. high school graduation.
Graduate Programs	Graduate programs are advanced studies leading to master's and doctoral degrees in the Arts, Humanities, Social Sciences, Sciences, Engineering, Business, Law, and Medicine.
Preparatory Program	Preparatory Programs are aimed at providing preparatory training for adults in secondary school subjects, literacy, and language. These includes Adult Basic Education, English as a Second Language and Adult Special Education.
Provincial Education Number	10 digit unique Personal Education Number assigned to each student in K-12 system. Leave blank if unknown.
Transfer students	Students admitted from a college, university college, or institute in B.C. and who have transferred with sufficient credits to be considered a transfer student as the basis of admission.
Undergraduate Program	Undergraduate Programs lead to bachelor's degrees in both general, applied and professional studies in the Arts, Humanities, Social Sciences, Sciences, Engineering, Business, Law, and Medicine. These include the one- and two-year Arts and Sciences programs at colleges that can lead to a two-year associate degree from the college and be credited towards an undergraduate degree at British Columbia degree granting institutions.

Appendix F. Bibliography

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& Devron Gaber, Associate Director, B.C. Council on Admissions and Transfer

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